



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

~~Substitute for form 1449A/PTO~~

**SUPPLEMENTAL  
INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

6

1

1

**Complete if Known**

Application Number	10/674,587 647,687
Filing Date	Aug. 25, 2003
First Named Inventor	S. Brandon Keller
Art Unit	2825
Examiner Name	Magid Y. Dimyan
Attorney Docket Number	100111228-1

## U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
M.YH		US-2002/0144219	10-03-2002	Zachariah, et al.	
		US- 2003/0200519	10-23-2003	Argyres	
		US- 2003/0208721	11-06-2003	Regnier	
		US- 2003/0221173	11-27-2003	Fisher	
		US- 5,249,133	09-28-1993	Batra	
		US- 5,301,318	04-05-1994	Mittal	
		US- 5,668,732	09-16-1997	Khouja, et al.	
		US- 5,673,420	09-30-1997	Reyes, et al.	
		US- 5,682,320	10-28-1997	Khouja, et al.	
		US- 5,696,694	12-09-1997	Khouja, et al.	
		US- 5,838,579	11-17-1998	Olson, et al.	
		US- 5,803,476	05-11-1999	Mauskar, et al.	
		US- 5,946,218	08-31-1999	Taylor, et al.	
		US- 5,949,691	09-07-1999	Kurosaka, et al.	
		US- 6,075,932	06-13-2000	Khouja, et al.	
		US- 6,272,671	08-07-2001	Fakhry	
		US- 6,330,703	12-11-2001	Salto, et al.	
		US- 6,345,379	02-05-2002	Khouja, et al.	
		US- 6,378,123	04-23-2002	Dupenloup	
		US- 6,490,717 B1	12-03-2002	Pederson, et al.	
		US- 6,493,884	12-10-2002	Liu	
		US- 6,529,861	03-04-2003	Patra, et al.	
		US- 6,531,923 B2	03-11-2003	Burns	
		US- 6,598,211	07-22-2003	Zachariah, et al.	
		US- 6,751,782 B2	06-15-2004	Levin, et al.	
		US- 6,801,884	10-05-2004	Ferrari, et al.	
		US- 6,836,877	12-28-2004	Dupenloup	

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				

**\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 601.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.**

English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

**Substitute for form 1449A/PTO**

## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

*(Use as many sheets as necessary)*

### Shee

of 1

**Complete If Known**

10/647 69

10,000,000

August 26, 2008

2825  
MAGID DIMITAN

Number 100111228-1

## U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
W/M-11		JP 07334532 A	12/22/1995	Mitsubishi Denki Semiconductor		

Examiner  
Signature

Date Considered

09/28/05 ✓

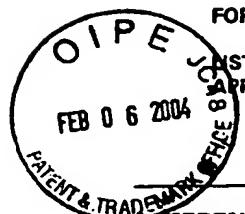
<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>2</sup> Applicant's unique citation designator/number (optional). <sup>3</sup> See Kinds of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>4</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>5</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>7</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

## PATENT APPLICATION

Sheet 1 of 6



FORM PTO-1449

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.	APPLICATION NO.	CONFIRMATION NO.
100111280-1	10/647,687	
APPLICANT		
S. Brandon Keller, et al.		
FILING DATE	GROUP	
Aug. 25, 2003	2825	

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
1	1A			
	1B			
	1C			
	1D			
	1E			
	1F			
	1G			
	1H			
	1I			
	1J			
	1K			

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	1L				
	1M				
	1N				
	1O				
	1P				

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

M 7(1)	1Q	KELLER, S. Brandon; ROGERS, Dennis R.; LELM, Charles A.; U.S. Patent Application Serial Number 10/706,682, Entitled: Method And Program Product For Determining Nets Requiring Detailed Electromigration And Self Heating Analysis In A Digital Integrated Circuit; Filed November 12, 2003
	1R	KELLER, S. Brandon; ROGERS, Dennis R.; LELM, Charles A.; U.S. Patent Application Serial Number 10/706,698, Entitled: Method And Program Product For Performing Self-Heating Analysis In A Digital Integrated Circuit Through A Single Cycle Transient Simulation; Filed November 12, 2003
	1S	KELLER, S. Brandon; ROGERS, Dennis R.; LELM, Charles A.; U.S. Patent Application Serial Number 10/706,376, Entitled: Method And Program For Visual Display and One-Click Repair Of Electromigration And Self Heating Design-Rule Violations In A Digital Integrated Circuit Layout Database; Filed November 12, 2003

EXAMINER

DATE CONSIDERED

09/28/05

FORM PTO-1449 <b>O 1 P</b> FEB 06 2004 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT Use several sheets if necessary)	ATTY. DOCKET NO. <b>100111228-1</b>	APPLICATION NO. <b>10/647,687</b>	CONFIRMATION NO.
APPLICANT <b>S. Brandon Keller, et al.</b>		FILING DATE <b>Aug. 25, 2003</b>	
		GROUP <b>2825</b>	

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
2A				
2B				
2C				
2D				
2E				
2F				
2G				
2H				
2I				
2J				
2K				

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	2L					
	2M					
	2N					
	2O					
	2P					

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

2Q	KELLER, S. Brandon; ROGERS, Dennis R.; LELM, Charles A.; U.S. Patent Application Serial Number 10/706,501, Entitled: Method And Program Product For Performing Electromigration Analysis In A Digital Integrated Circuit By Converting A Netlist To A DC Model And Performing DC Analysis Of The DC Model; Filed November 12, 2003
2R	KELLER, S. Brandon; ROGERS, Dennis R.; LELM, Charles A.; U.S. Patent Application Serial Number 10/706,526, Entitled: Method And Program Product For Performing A Worst Case Electromigration And Self Heating Analysis In A Digital Integrated Circuit With Worst-Case Superposition Of Partial Currents; Filed November 12, 2003
2S	KELLER, S. Brandon; ROGERS, Dennis R.; LELM, Charles A.; U.S. Patent Application Serial Number 10/706,692, Entitled: Method And Program Product For Performing Electromigration Analysis In A Digital Integrated Circuit Through A Single Cycle Transient Simulation; Filed November 12, 2003

EXAMINER

DATE CONSIDERED

09/28/05

O P E  
FORM PTO-1449

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT  
FEB 06 2004  
PATENTS & TRADEMARKS (use several sheets if necessary)

ATTY. DOCKET NO.	APPLICATION NO.	CONFIRMATION NO.
100111228-1	10/647,687	
APPLICANT		
S. Brandon Keller, et al.		
FILING DATE	GROUP	
Aug. 25, 2003	2825	

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	3A			
	3B			
	3C			
	3D			
	3E			
	3F			
	3G			
	3H			
	3I			
	3J			
	3K			

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
		3L				
		3M				
		3N				
		3O				
		3P				

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

3Q	KELLER, S. Brandon; ROGERS, Dennis R.; LELM, Charles A.; U.S. Patent Application Serial Number 10/706,508, Entitled: Method And Program Product For Performing Self-Heating Analysis In A Digital Integrated Circuit Layout Database by Substituting Resistive Models For Active Devices; Filed November 12, 2003
3R	KELLER, S. Brandon; ROGERS, Dennis R.; ROBBERTS, George H.; U.S. Patent Application filed under EV210655516US; Entitled: Method And Program Product For Determining Worst Case Currents In A Digital Integrated Circuit Through Worst-Case Superposition Of Partial Currents; Docket No.: 200300123-1; Filed January 30, 2004
3S	KELLER, S. Brandon; ROGERS, Dennis R.; ROBBERTS, George H.; U.S. Patent Application filed under EV210655564US; Docket: 200308901-1; Entitled: Systems And Methods For Re-Using Circuit Design Analysis Results; Filed January 30, 2004

EXAMINER

DATE CONSIDERED

09/28/05

## PATENT APPLICATION

Sheet 4 of 6

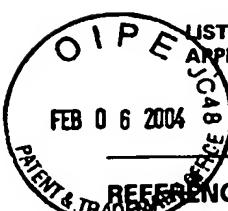
FORM PTO-1449

ATTY. DOCKET NO.	APPLICATION NO.	CONFIRMATION NO.
100111228-1	10/647,687	
APPLICANT		
S. Brandon Keller, et al.		
FILING DATE	GROUP	
Aug. 25, 2003		2825

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT

FEB 06 2004

(Use several sheets if necessary)



## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
4A				
4B				
4C				
4D				
4E				
4F				
4G				
4H				
4I				
4J				
4K				

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
4L					
4M					
4N					
4O					
4P					

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

4Q	KELLER, S. Brandon; ROGERS, Dennis R.; ROBBERTS, George H.; U.S. Patent Application filed under EV210655581US; Docket No.: 200308899-1; Entitled: System And Method For Determining Detail Of Analysis In A Circuit Design; Filed January 30, 2004
4R	KELLER, S. Brandon; ROGERS, Dennis R.; ROBBERTS, George H.; U.S. Patent Application filed under EV210655595US; Docket No.: 200308898-1; Entitled: Systems And Methods That Identify Equivalent Instantiation-Specific Configuration Information For Analysis Tools; Filed January 30, 2004
4S	KELLER, S. Brandon; ROGERS, Dennis R.; ROBBERTS, George H. & STEVENS, Scott Alan; U.S. Patent Application filed under EV210655520US; Entitled: System And Method To Limit Analyzed Current Flow In A Circuit Design; Filed January 30, 2004

EXAMINER

DATE CONSIDERED

09/28/06

## PATENT APPLICATION

Sheet 5 of 6

<p>FORM PTO-1449 O I P LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT FEB 06 2004 (Use several sheets if necessary)</p>	ATTY. DOCKET NO. <b>100111228-1</b>	APPLICATION NO. <b>10/647,687</b>	CONFIRMATION NO.
	APPLICANT <b>S. Brandon Keller, et al.</b>		
	FILING DATE <b>Aug. 25, 2003</b>	GROUP <i>2825</i>	

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
5A				
5B				
5C				
5D				
5E				
5F				
5G				
5H				
5I				
5J				
5K				

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
5L					
5M					
5N					
5O					
5P					

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

5Q	KELLER, S. Brandon; ROGERS, Dennis R.; ROBBERTS, George H.; U.S. Patent Application filed under EV210655533US; Docket: 200310172-1; Entitled: System And Method For Processing Configuration Information; Filed January 30, 2004
5R	KELLER, S. Brandon; ROGERS, Dennis R.; ROBBERTS, George H.; U.S. Patent Application filed under EV210655555US; Docket: 200310170-1; Entitled: System And Method For Balancing Run-Time And Result Accuracy In A Circuit Design Analysis Tool; Filed January 30, 2004
5S	KELLER, S. Brandon; ROGERS, Dennis R.; ROBBERTS, George H.; U.S. Patent Application filed under EV210655578US; Docket: 200308900-1; Entitled: System And Method For Indicating Logic State Combinations Used During Circuit Design Analysis; Filed January 30, 2004

EXAMINER

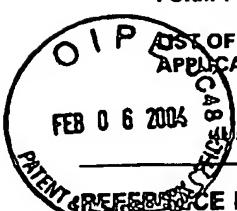
DATE CONSIDERED

## PATENT APPLICATION

Sheet 6 of 6

FORM PTO-1449

ATTY. DOCKET NO.	APPLICATION NO.	CONFIRMATION NO.
100111228-1	10/647,687	
APPLICANT		
S. Brandon Keller, et al.		
FILING DATE	GROUP	2825
Aug. 25, 2003		

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT

FEB 06 2004

(Use several sheets if necessary)

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
6A				
6B				
6C				
6D				
6E				
6F				
6G				
6H				
6I				
6J				
6K				

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
6L					
6M					
6N					
6O					
6P					

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

6Q	KELLER, S. Brandon; ROGERS, Dennis R.; ROBBERTS, George H.; U.S. Patent Application filed under EV210655547US; Docket: 200310171-1; Entitled: System And Method For Determining Control Signal Combinations For Use During Simulation Of A Stage Of A Circuit Design; Filed January 30, 2004
----	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

6R	
6S	

EXAMINER	DATE CONSIDERED
	09/28/04